# ITEMS OF INTEREST.

VOL. VIII. PHILADELPHIA, JULY, 1886. No. 7.

## Thots from the Profession.

### "CREDIT TO WHOM CREDIT IS DUE." "WAS IT HONEST?"

DR. W. W. ALLPORT. CHICAGO.

I notice in the April Number of the "ITEMS OF INTEREST," you give me credit for an article on "*Fruits; what they contain and what they are for,*" which you copied from the "People's Dental Journal," of which I was editor. As the article was signed "A" your inference was quite natural, but that "credit be given to whom credit is due," I wish to say, this instructive paper was written by my friend Prof. Edmund Andrews of the Chicago Medical College.

I find in your May number, an article entitled "Was it Honest?" by Dr. Norman W. Kingsley, of New York, in which he gives an account of what, by inference, would be considered an unprofessional and dishonest act, on the part of some dentist, (whose name is not given,) in failing to pay over certain moneys to Dr. Kingsley that had been collected on Dr. K.'s account.

As related, the case is, in some respects, a very peculiar one, and but for the fact that the statement is made by so distinguisht a practitioner, one might be led to question whether the "facts" mentioned by him were not slightly colored, or some important "facts" in the transaction omitted in the statement. From what he says, it is but reasonable to suppose (or rather it would be unreasonable not to suppose) that accompanying the package mentioned, there was an explanatory letter and an itemized statement of the money transaction of the question involved. In fact, from the minuteness with which he gives certain items, it is evident that just such a letter and statement did accompany this package and that both are still in his possession, for such exactness could hardly be given without reference in certain particulars to such documents.

May I not, as a member of the profession, therefore, suggest to Dr. Kingsley that he send to you for the August number of the

"ITEMS," not a copy, not a synopsis, but the *original* of this letter and statement for publication?

In the case, as stated, there can be no question as to Dr. Kingsley's legal ability to recover a judgment for at least the amount of the money retained by the dentist referd to, and if the occurrence is of a date so recent that it is not outlawed, no time should be lost in commencing an action to recover the claim. If, on the other hand, the transaction was of a date, now so old that the claim is outlawed, will the Doctor state whether any steps were ever taken to collect it, and if so, why the matter was not pusht to an issue? As the Doctor has mentioned this matter, it seems to me that the profession should know more about it. So, let us have the "original letter and statement" that it may be more fully explained either by Dr. Kingsley, the dentist, or others involved in the question of, "Was it Honest?" and if not honest, that it may appear who was dishonest.

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## WOMEN IN DENTISTRY.

STATEMENT OF THE INITIAL STEP BY PROF. JAMES TRUMAN, THEN OF PENN. DENTAL COLLEGE. FROM MISS SUSAN B. ANTHONY'S FORTHCOMING WORK.

The general agitation of the question: What are women best qualified for in the struggle for existence? naturally led liberal minds to the opening of new avenues for the employment of their talents, shared equally with men. Her right to practice in medicin had been conceded after a long and severe conflict. Even the domain of the theologian had been invaded, but law and dentistry were as yet closed, and, the latter, unthot of as an appropriate vocation for women. The subject, however, seemed so important, presenting a field of labor peculiarly suited to her, that one gentleman, then professor in the Pennsylvania College of Dental Surgery, felt it his duty to call public attention to this promising work. In a valedictory delivered by him to the class of 1866, at Musical Fund Hall of Philadelphia, he included in his theme the peculiar fitness of dentistry for women. The question was briefly stated, but it rather startled the large audience by its novelty, and the effect was no less surprising on the faculty, board of trustees, and professional gentlemen on the platform.

In the fall of 1868 the dean of the Pennsylvania College of Dental Surgery was waited on by a German gentleman, who desired to introduce a lady who had come to this country with the expectation that all colleges were open to women. Tho informed that this was not so, he still entertained the hope that she might be admitted as a student of dentistry. She gave her name as Henrietti Hirschfeld, of Berlin. The

subject came before the faculty, and after a free discussion of the whole subject, she was rejected, but two voting in her favor.

In a subsequent interview with Professor Truman, he learned that she had left her native land with the full assurance that she would have no difficulty in "free America" in securing a dental education. She had also the positive sanction of her government, through the minister of instruction, Dr. Falk, that on condition of receiving an American diploma she would be permitted to practice on her return. Her distress, therefore, at this initial failure was great. The excitement this application made was intensified when it was rumored among the students that a woman desired to be matriculated. The opposition became very bitter, and manifested itself in many petty annoyances. In the course of a day or two one gentleman of the faculty, and he the dean, concluded to change his vote, and as this decided the question, she was admitted. The opposition of the professor of anatomy, who belonged to the old school of medical teachers, was so manifest that it was deemd advisable to have her take anatomy in the Women's Medical College for that winter. The first year this was in every way satisfactory. Tho the students received her and Mrs. Truman, who accompanied her on the first visit, with a storm of hisses, they gradually learned not only to treat her with respect, but she became a favorit with all, and while not convinct as to the propriety of women in dentistry, they all agreed that Mrs. Hirschfeld might do as an exception. The last year she was permitted by the irate professor of anatomy, Dr. Forbes, to take that subject under him.

She graduated with honor, and returned to Berlin to practice her profession. This was regarded as an exceptional case, and by no means settled the status of the college in regard to women. The conservative element was exeedingly bitter, and it was very evident that a long time must elapse before another woman could be admitted. The great stir made by Mrs. Hirschfeld's graduation brot several other applications from ladies of Germany, but these were without hesitation denied. Failing to convince his colleagues of the injustice of their action, Dr. Truman tried to secure more favorable results from other colleges, and applied personally to Dr. Gorgas, of the Baltimore College of Dental Surgery. The answer was favorable, and he accompanied the applicant and entered her in that institution. This furnisht accommodation for a few applicants. The loss in money began to tell on the pockets, if not the consciences, of the faculty of the Philadelphia school. They saw the stream had flown in another direction, swelling the coffers of another institution, when, without an effort, they could have retained the whole. They concluded to try the experiment again, and accepted three ladies in 1872 and 1873—Miss Annie D. Ramborger

of Philadelphia, Fraulein Veleske Wilcke and Dr. Jacoby of Germany. Their first year was very satisfactory, but at its close it was very evident there was a determination on the part of the minority of the class to spare no effort to effect their removal from the school. A petition was forwarded to the faculty to this effect, and tho one was presented by the majority of the students in their favor, the faculty chose to accept the former as representing public sentiment, and it was decided not to allow them to take another year at this college. This outrage was not accomplisht without forcible protest from the gentleman previously named, and he appealed from this decision to the governing power, the board of trustees.* To hear this appeal a special meeting was called for March 27, 1873, at which the communication of Professor Truman was read and ordered filed. A similar communication in opposition was received, signed by Professors T. L Buckingham, E. Wildman, George T. Barker, James Tyson and J. Ewing Mears. It was referred to a committee consisting of Hon. Henry C. Cary, W. S. Pierce and G. R. Morehouser, M. D. At a special meeting convened for this purpose, March 31, 1873, this committee made their report. They say:

"Three ladies entered as students of this college at the commencement of the session, 1872-73, paid their matriculation fees, attended the course of lectures, and were informed, by a resolution adopted by a majority of the faculty at the close of the session, that they would not be permitted to attend the second course of lectures. No other cause was assigned for the action of the faculty than that they deemed it against the interest of the college to permit them to do so, on account of the dissatisfaction which it gave to certain male student. * * * The goal to which all medical and dental students look, is graduation and the diploma, which is to be the evidence of their qualification to practice their art. To qualify themselves for this they bestow their time, their money, and their labor. To deprive them of this without just cause

* As through the influence of Dr. Truman Miss Hirschfeld had first been admitted to the college, he felt in a measure responsible for the fair treatment of her countrywomen who came to the United States to enjoy the same educational advantages. When the discussion in regard to expelling the young women was pending, Dr. Truman promptly and decidedly told the faculty that if such an act of injustice was permitted he should leave the college also. Much of Dr. Truman's clearsightedness and determination may be traced to the influence of his noble wife, and no less noble mother-in-law, Mary Ann McClintock, who helpt inaugurate the movement in 1848 in Central New York. She lamented in her declining years that she was able to do so little. But by way of consolation I ofn suggested that her influence in many directions could never be measured; and here is one: Her influence on Dr. Truman opend the dental college to women, and kept it open while Miss Hirschfeld acquired her profession. With her success in Germany, in the royal family, every child in the palace for generations that escapes a toothake will have reason to bless a noble friend, Mary Ann McClintock, that she helpt to plant the seeds of justice to women in the heart of young James Truman. We must also recognize in Dr. Truman's case that he was born and trained in a liberal Quaker family, his own father and mother having been disciples of Elias Hicks.—*Editor History of Woman Suffrage.*

is to disappoint their hopes, and to receive from them money and bestowal of time and labor without the full equivalent which they had a right to expect."

After discussing at length the legal aspects of the case, the summing up is as follows:

"We, therefore, respectfully report that in our opinion it is the legal right of these ladies to attend, and it is the legal duty of this college to give them, as students, a second course of lectures on the terms of the announcement which forms the basis of the contract with them."

This report was signed by all the committee, and read by W. S. Pierce, one of the number, and Judge of the Court of Common Pleas, of Philadelphia. It carried with it, therefore, all the force of a judicial decision, and was so accepted by the board, and adopted at once. This left the majority of the faculty no choice but to accept the decision as final as far as these ladies were concerned. This they did, and the three were invited to resume their studies. Two, Misses Ramborger and Wilcke, accepted, Miss Jacoby refused and went to Baltimore.

The most interesting feature of the subject, and that which clearly demonstrated a markt advance in public opinion, was the stir it made in the press. The daily and Sunday papers bristled with strong leaders, the faculty being denounct in no measured terms for their action. To such an extent was this carried, and so overwhelming was the indignation, that it practically settled the question for Philadelphia, and tho several years elapst after these ladies were gradated before others were accepted, when the time did arrive, under the present dean, Dr. C. N. Pierce, they were accorded everything, without any reservation, and the school has continued to accept them. At a meeting of the National Association of Dentists, held at Saratoga, 1869, Dr. Truman introduced a resolution looking to the recognition of women in the profession. The resolution and the remarks were kindly received, but were, of course, laid on the table. This was expected, the object being to make the thòt familiar in every section of the country.

These efforts have born rich fruit, and now women are being educated at a majority of the prominent dental colleges, and no complaints are heard of coeducation in this department of work. The college that first accepted and then rejected—the Pennsylvania, of Philadelphia—has a yearly average of seven to eight women, nearly equally divided between America and Germany. Of the three dental schools in Philadelphia, two accepted women, and the third—the Dental Department of the University of Pennsylvania—would, if the faculty were not overruled by the governing powers.

The learned theories that were promulgated in regard to the injury the practice of dentistry would be to women, have all fallen. The advocates of women in dentistry were met at the start with the health question, and as it had never been tested, the most favorably inclined lookt forward with some anxiety to the result. Fifteen years have elapst since then, and most every town in Germany is supplied with a woman in this profession. Many are also establisht in America. They have all the usual requisites of bodily strength, and we have yet to learn of a single failure from physical deterioration.

The first lady to graduate in dentistry, Miss Lucy B. Hobbs, was sent out from the Cincinnatti college, and she, I believe is still in practice in Kansas. She graduated in 1866. Mrs. Hirschfeld returned to Germany and became at once a subject for the fun of the comic papers, and for the more serious work of the *Bojan* and *Uberlana und Meer*, both of them containing elaborate and illustrated notices of her. She had some friends in the higher walks of life; notable among these was President Lette, of the *Trauen-Verein*, whose aid and powerful influence had assisted her materially in the early stages of her effort. The result of these combined forces soon placed her in possession of a large practice. She was patronized by ladies in the highest circles, including the crown princess. She subsequently married, had two boys to rear and educate, and a large household to supervise. She has assisted several of her relatives into professions, two in medicin and two in dentistry, besides aiding many worthy persons. She has establisht a clinic for women in Berlin, something very badly needed there. This is in charge of two physicians, one being her husband's sister, Dr. Fanny Tiburtius. She has also started a hospital for women. These are mainly supported by her individual exertions. Notwithstanding all these multifarious and trying duties, she practices daily, and is as well physically and mentally as when she commenct. Fraulein Valeske Wilcke, of Königsberg, has been over twelve years in a large practice with no evil results; Miss Annie D. Ramborger,an equal time, with an equally large practice, and enjoys apparently far better health than most ladies of thirty.—*Odontographic Journal.*

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**Moving an Incisor or a Cuspid.**—Dr. Essig prefers a rubber plate with a stud of rubber extending back of the tooth to be moved; through this stud he passes a gold screw with the point resting against the tooth to be moved. The object of the screw is not to move the tooth by itself, but simply as a means of regulating the elasticity of the rubber; as the screw is tightened the rubber stud is slightly bent back, the elasticity of the stud supplying the pressure which moves the tooth.

## DR. J. MARION SIMS' FIRST VENTURE AS A WRITER.

EXTRACT FROM "THE STORY OF MY LIFE."

In the latter part of 1844, there came to my office one day a young woman from Lowndes county, who was about thirty years old. She had on a double thick vail, blue, folded double. She could not show herself in the street, so hideous was she. She walkt into my office with her face vailed, and said:

"I have heard of your achievements in surgery, Dr. Sims, and I have come to see if you can do anything for me. I was born with a hare-lip, and am so ugly that I have to wear a vail to prevent my face being seen, even by my own family."

I said, "Raise your vail, and show me your face." When she did raise it, the sight was horrible. I had never seen such a bad hare-lip before. It was sickening. Out from the end of her nose was a little bone—a snout—and from the tip end of her nose there was a small piece of skin, about three-fourths of an inch long, looking like a shriveled gobler's snout. She had no teeth, and I could look clear down her throat. Altogether her malformation was frightful.

I said, "I can cure you in a month."

"You can?" she eagearly replied, as a ray of hope came across her.

I said, "Certainly; I will give you a new set of teeth, so that you can eat like other folks, and whistle if you want to, and you will know the value of the society and association of your friends."

To make a long story short, in the course of a month she was entirely cured. She had a very presentable mouth, and Dr. Belangee, who was the leading dentist of the town, took an impression of the roof of her mouth, and made her a set of four handsome teeth. When he had finisht his part of the work, she was a very presentable person, and really a pretty woman. Her life was enlivened and revolutionized.

The curing of this woman from Lowndes county was of itself a small affair, but it was the beginning of one of my little life stories, and plays an important part in it. The plaster cast made by Dr. Belangee for the roof of the woman's mouth was given to me, and for some time it lay on my mantel-piece. Everybody who came in lookt at it, and I said, "That is the plaster cast of Miss So-and-So's mouth, of Lowndes county." Dr. Harris, of Baltimore, the founder of the Baltimore College of Dental Surgery, the first of the kind in this country or the world, and his friend, Dr. Lipscomb, came to visit Montgomery in the year 1846. Through the Lipscomb interest in the county and among the wealthy classes, Dr. Harris was called to so many of the aristocratic families that for two or three months he entirely

displaced my friend Dr. Belangee. He was a magnificent man, of fine physical beauty, a gentleman of great intellect, great kindness of heart, and a very accomplisht dentist. He was perhaps the very best of that day in the world.

One day he stroled into my office. I had been to call on him, and he returned it. Having an eye quick to discern anything pertaining to his profession, he walkt up to the mantel and pickt up the plaster cast lying there.

"Doctor, what is this?" he askt, after he had lookt it over carefully, and examined the wonderful cast. I gave him a history of the case, as above related. "I will tell you what, Dr. Sims, I would like you to do. I would like you to write an account of it for the September number of my *Journal of Dental Surgery*.

I said, "Doctor, I can't write anything. I never wrote anything in my life."

"But," he said, "write it as you would talk it, or as you have told it to me. That is all; I will risk you."

"I should be ashamed," I said, "to see anything of mine in print. I am counted as a great worker, to be sure, and I always keep notes of my cases; but I cannot write. I never wrote anything in my life. It is not my forte."

He insisted, however, and I sat down and wrote a history of the case in the simplest manner possible, and gave it to him. I was ashamed of it, however, when I gave it to him. In the course of two or three months after, Dr. Harris sent me a number of the *Journal of Dental Surgery*, containing my article, and a little wood-cut illustrating the plaster cast. I read the article and was ashamed of it, and determined I would not show it to any of my medical brethern. I arrived at this conclusion because there were a number of *literati* among them; and, tho I was not ashamed or afraid to perform any operation before them, or even in the presence of the best of them, still I did not feel I was competent to write; especially when compared to Ames, or Bowling, or Baldwin.

Bowling was a most volumnious writer. He had written some really valuable and meritorious articles for the medical literature of the country, which markt the era in which he lived, and which have been incorporated into the literature of the profession, specially his articles on the "Endemic Diseases of the Mouth." He had also written on fevers and neumonia, and had discust a variety of surgical questions. But the man I feared was Ames. Of course, I was on the most friendly terms with all the doctors in Montgomery. Ames was a man everybody respected, but whom nobody loved. They were all rather afraid of him. He had the best practice of the country.

He was a quiet, dignified, reticent, skilful man, who filled a very useful and prominent place in his profession. His opinion was sought on all questions, and on all occasions of great importance; and no man in high life ever died, in any other physician's hands, unless Dr. Ames was called in consultation.

I liked and admired him, and I also feared him. He was hypercritical, specially in literary subjects. I was not afraid to perform any operation before him, because I was a surgeon and he was not. He took a kindly interest in me and patronized me. He at one time offered me a partnership, but I was too smart to take it. I saw that he had an immense practice, but I had as much as I could do, and the work was growing, I had only to eliminate the least desirable part of my practice as it increast among the higher walks of life. Dr. Ames was enjoying the full fruition of all that he could have achieved. I knew that, if I accepted a partnership, I would be compeld to do all his country work, which would break me down. As I was doing well enuf, I wisely concluded to let well enuf alone, and suggested as a suitable partner in my stead, another young man in town who had nothing to do, and whom he afterwards accepted.

Well, when the journal arrived I read the article and I determined that Ames should not see it, nor Baldwin, nor Bowling, nor anybody else. I knew that there was not another copy of the work taken in the city. I walkt into my library, which, by the way, had increast beyond the seven volumes of Eberle, and stept up to my book-case, and on a shelf, level with my eye, pulled out a large volume, and put the dental journal behind it, standing it up on its edge, behind the books on the shelf, with the flat surface to the wall. I then replact the book in its proper position. Some months after this, Dr. Ames happened to walk into my office; he had called to make me a social visit, as we frequently exchanged naborly visits. After we had talkt over endemic diseases and the other topics of the day, he walkt to the bookcase with the inquiry, "Have you got in any new books lately?" I said, "No." I stood there, and he lookt at all the books on the shelf, and pulled out with his left hand the very identical one behind which I had hidden the dental journal six months before. As he pulled it out his quick eye saw something in a new cover hidden away. While he held the book with his left hand, he reacht with his right and pulled out the offending journal, of which I had been so choice, and which I had resolved no one should see. If anybody had told him, he could not have gone more deliberately to the place and found it. To-day it is the most unexplainable thing that ever happened me. He did not look into the large book, but he held in his hand the fresh dental journal, and commenced turning over the leaves, one after the

other. He had never seen the dental journal before, and it excited his curiosity, so that he became much interested in it, and all the more interested in it because it was new.

I said to myself, "My God! if he goes on in this way, he will come to the article on the 'Lowndes County Girl's Hare-Lip,' and he will give me fits. I was trembling like a leaf, as I stood there like a schoolboy. Still he stood there, turning over leaf after leaf, and, when he got to where the case was described he did not look up at all, or say a word, but stood there reading it down on the first page, and then on the other page, deliberately reading it through. It just occupied two pages. My heart was in my throat. As he finisht the article he stood perfectly still, and I also stood perfectly still, trembling. As he turned round I thot, "I shall get it now."

In a momont he said, "What would I give if I had the faculty of expressing myself in writing like that?"

I said: "My dear doctor, you have lifted a great load from my heart. Here I have been bewildered all this time, and you have frightened me most to death, and I don't know what you mean."

"I have never read a thing so natural in my life as your description of the case," he replied; "I could not write that way to save my life. What I do write is labored; but what you write comes natural, it seems. Now, let me give you a piece of advice. I have seen you perform many beautiful operations, and many difficult, and, as long as you have this power, I advise you to report them for the press. Seeing you are so timid, and lack confidence in yourself, if you will send your productions to me I shall be very glad to make such suggestions as are necessary, and to return them to you for your consideration." I accepted his generous proposition; and, but for the encouragement that Dr. Ames gave me, I would not have written anything; for I was not aware that I possest any capacity in that direction.—*Odontographic Journal.*

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**Cocain, in Taking Impressions of the Mouth.**—Dr. J. Morgan Howe cites an instance, quite interesting: In endevoring to get an impression of a gentlemen's mouth for an artificial denture, he found the mucous membrane of the roof so exceedingly sensitive it would not bear the touch of the impression cup, and even a touch with the finger caused severe gagging. The gentleman said that repeated efforts had been made by other dentists to get impressions of his mouth, but without success. He had submitted to trials nine times, and each time he nearly gagged himself to death. Remembering that Dr. Bogue once suggested the use of cocain, Dr. Howe applied a little of the solution to the roof of the mouth, and in six minutes after took the impression without trouble.

## HISTORICAL REMINISCENCES.

[CONCLUDED FROM PAGE 254]

C. S. CRITTENDEN, D.D.S., L.D.S., HAMILTON, ONT.

[Read before a Union Meeting of the Seventh and Eighth District Dental Societies of New York, Publisht by the *Independent Practitioner*.]

In 1851, Dr. John Allen promulgated his process of mounting teeth on a platinum base. Dr. Wm. M. Hunter invented a somewhat similar process, both having continuous gums, and a war of words was carried on for a long time. In the end Allen succeeded, and no one appears to have heard of Hunter's process for years.

In April, 1853, Mr. Alfred J. Watts, of Utica, N. Y., obtained a patent for the manufacture of sponge gold. This was the first move in the direction of contour filling. For some time Mr. Watts was not successful in producing gold that would save teeth, and complaints were made of a blue line about the margins of the cavities filled with it, which would increase till the filling was defective. The profession ot to raise a monument to Mr. Watts, as it was from this preparation of gold that the first adhesive foil was made.

Dr. Spooner had, some years before this, introduced the idea of destroying pulps with arsenic, and in my early dental days many dentists were in the habit of devitalizing the pulp on one day and filling it on the next, without attempting to remove the pulp. Of course, there was trouble in most cases, so that, too, soon lost caste.

About 1854, some one suggested the idea of retaining partial sets of teeth by atmospheric pressure. I cannot remember who first proposed this method of insertion, but it met with a great deal of opposition at the outset, and did not come into general use for some years.

In 1855, Mr. J. R. Quinton, of London, Eng., introduced congelation as a local anesthetic. Like hundreds, I invested my hard-earned dollars in two or three different forms of apparatus for producing local anesthesia, but it was a decided failure.

In 1856, rubber was brot out as a base for artificial teeth. Probably no appliance pertaining to dentistry has ever been received and adopted by the profession so universally as this. It is *the base* which is found where artificial teeth are inserted. In the same year Blandy's cheoplastic method of mounting artificial teeth was given to the public. It had its advantages for lower sets, but rubber soon pusht it one side.

In the early part of 1857, Dr. Harvey Burdell was found dead in his office, having been murdered by some unknown person during the previous night. His taking off created a great sensation at the time, but no definite solution of the manner has ever been made.

In the same year Dr. Robt. Arthur informed the profession that he had discovered a simple method of keeping proximate cavities dry while operating, which was to cut off a piece of rubber tubing, such as

is used in regulating teeth, and slip it over the crown, and down on the neck of the tooth to be filled, thus forcing the gums away. It was a move in the right direction. It was in this same year that Slayton's colored gutta-percha base for artificial teeth was brot out. Of all the innumerable humbugs that have been imposed on the profession this was about the biggest.

I ot to have stated that the American Dental Convention was formed, or rather organized, at Philadelphia during the 2d, 3d, and 4th days of August, 1855.

This meeting had been called by a committee of members of the profession, which met at Philadelphia during the previous year. A constitution had been formed, and everything so carefully prepared by the committee that the convention was born, and ready for action on the day of its birth.

The year of 1859 is the most memorable one in the annals of dental science. On the 3d of August, of that year, delegates from the Cincinnati Dental Association, Ohio College of Dental Surgery, Mississippi Valley Association, Ohio Dental College Association, Pennsylvania College of Dental Surgery, Western Dental Association, Pennsylvania Association of Dental Surgeons, Indiana State Dental Association, St. Louis Dental Association, and Pittsburgh Dental Association met at Niagara Falls "to determine on the expediency of forming a National Dental Association on a representative basis," and, tho a meeting of the dentists of New York city, held during the previous month, past resolutions protesting against the formation of such an association, declaring that the American Dental Convention was all that was required, the delegates proceeded to, and did, form the American Dental Association. Meetings have been held annually since, with the exception of the first year of the late war, 1861. The work performed by the Association has been extensive and valuable. The Dental Convention, too, proved useful, but in another direction.

In January, 1867, Dr. B. W. Day, of Kingston, Ont., called a meeting of the dentists of the Province, at Toronto, for the purpose of asking the legislature to incorporate the profession. As only seven responded to the call, those present formed themselves into a dental society. A committee was appointed to draft a bill, which was to be laid before a meeting of the dentists of the Province, to be held at Cobourg in the following July. The meeting at Cobourg was well attended; the draft of the bill was fully considered, and eight persons were recommended to Parliament to represent the profession on the Board of Examiners. Let it be remembered that this was the first attempt at dental legislature.* As it had to be, in the nature of things,

* The State of Alabama had on her statute books a very stringent dental law, which antedates that of Canada by nearly ten years.—*Independent.*

a popular measure with the profession to get it past, the wonder is that it is as good a bill as it is. It is awkward in many of its provisions, and hard to be understood in others, still I think it is the best dental act in existence. Petitions poured into the legislature from many quarters against the passage of the act. The promoters were at times greatly discouraged, but, as "All's well that ends well," on the last night of the session the bill was read a third time and past. It is not necessary to add more on the subject than to say that the act has been very successfully carried out from the first, and that there are now very few practicing illegally in the Province. Since the passage of the Ontario act, the Province of Quebec England, several of the Continental States of Europe, and most of the different States of the American Union have legislated on the subject of dental practice; but whether the profession stands in a better position now than it did previous to any legislation, is a question which time alone can decide.

I cannot close this paper without speaking of the different manners of dentists in my early dental life, and now. Then, if you called on a brother practitioner he would treat you as an interloper, and if you proposed to speak on subjects dental, he would tell you (as I have been told) that "no information can be obtained from me without pay." Now, we meet like brothers, and consult on the best methods of procedure. The dentists of to-day can well quote Mark Twain's saying—"the amount that the ancients didn't know, is voluminous"—and not be far astray, and yet they did much good work, when the appliances they possest are taken into consideration. Let me speak of a few of those which we consider perfectly indispensable now, but which were unknown in my early life: The operating chair, with all its conveniences; the lathe; napkins; duct compressors; the hand, automatic, and electric mallets; the dental engin in its various forms; the rubber dam; the different adhesive forms of gold; and many, many other appliances of minor yet great importance to the dental operator. The profession at large owes a det to the old Western New York Society, as many of these appliances are the inventions of some of its members. From one, dental colleges have become many. Dental societies have sprung up all over the land. Dental journals, from one to two small quarterlies then, to numerous large, well-edited periodicals of the present. Then, the dentist was scorned by the physicians; now, he is treated like a brother, and there seems little dout that the dentist of the near future will be an acknowledged specialist of the medical profession.

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**Illinois Dental Society Transactions** have been kindly sent us by Dr. J. Wassel, of Chicago. We will try to make a good use of it.

## THE SUBSTANCE, AND THE FUNCTIONS OF THE NERVES.

DR. GARRETT NEWKIRK, CHICAGO.

In the material world the forces are the physical and the chemical. In the vegetable there is superadded the mysterious force we denominate vital. In animal life alone do we find the nervous.

The distinctive feature of the animal kingdom, from the lowest to the highest forms, from the simplest to the most complex, is the possession of nervous substances either in visible structure or as a property of protoplasmic fluid.

In man we have the same physical, chemical, and vegetative forces that exist in external nature, but in a sense these are all subordinated to the energies resident in his mass of nervous tissue.

Nervous tissue is divided into the gray and the white. These two are intimately associated and co-related. They lie side by side in brain, cord, and ganglion. There is no abrupt line dividing them. They are, as it were, interlaced. The gray tint is not suddenly but gradually effaced in the meshes of the white. Of the two, the gray is the more homogeneous—more distinctively cellular in structure. The white tends to parallelism of arrangement more and more as it recedes from the gray till it completes its purpose in the formation and distribution of nerves. The white is the firmer, not so much by inherent difference, but by the addition of interstitial layers of fibrous connective-tissue. Consequently we find the gray substance so placed as to receive the best possible protection from external causes of injury. In the cord it is enclosed and protected by the white, and both are guarded from injury by a most ingenious arrangement of the bones that form the spinal canal—an arrangement which permits motion without danger to the great nerve trunk. Within the skull this order is reverst. The gray substance is on the outside—spread out on the surfaces of the convolutions, and lies just within the cranial walls. But it is well protected from shocks.

The skull is double-plated, the two plates being in places somewhat separated by spongy bone.

Three distinct membranes lie between the skull and the gray, forming a protective cushion.

The arrangement of the folds or convolutions is such as to permit some lateral movement of the folds themselves, valuable as against the shock of external violence.

This arrangement of the gray substance on the surface and in folds allows the placing of the greatest amount with the least thickness at any point; and if an organism so jelly-like were otherwise arranged, it would be in danger of breaking down by its own weight, or the weight of other substance, or from jars, shocks, or congestion.

We may say of the gray nerve substance that it is the center of animal life and action. So far as we know, there is no form of life where the white exists without the gray, or some form of protoplasm which represents it. And the white is servant to the gray,—subordinate both in motion and sensation.

Regarding the structure of the gray, it is sufficient for our purpose to say it is little more than an aggregation of nerve-cells, with just sufficient connective nerve-tissue to hold it in form.

But as we know the constitution of the ocean by the analysis of a single drop of water, so we may understand quite well the character of nerve substance in mass when we have learnt the structure and habits of a single cell, or a series of connected cells.

Each cell takes cognizance of whatever comes in contact with it. It is an intelligence officer to the central cell.

By the term sensitive we mean, all cells receive impressions from without and transmit them to the center, and this whether the mind is conscious of the impression or not—whether the center is the brain, or the cord, or a simple ganglion.

The sensitive cells perform much work dissociated from mental consciousness. The mind is not troubled by the ordinary and healthy processes of organic life. These are under the control and supervision of the lower ganglia, with which the sensitive cells of the heart, lungs, and other vital organs communicate. The sensitive cells take cognizance of many things of which the mind cannot be cognizant—Insensible properties, such as exist in deadly poisons. The sensitive cells are the sentinels on guard at every outpost; they preserve every interest in every tissue. By this intelligence, nutrition is regulated and supply is made equal to the demands of waste; on their information glands secrete in proper amount, and the circulation is hastened or retarded.

But we must let our minds be plainly imprest with one distinctive fact as to the sensitive cell. It does not originate anything; it is simply an informer. It is not a governing cell. It is a news reporter, but not an editor. Its only connection with the central office is by wire, and its busness is to send messages but never to receive any.

Each sensitive cell has its own wire; so we assume, tho it cannot be demonstrated, that a small group of filaments, nerve fibrils, and a part of the sensitive nerve may use the same line. This wire transmits but one way. The sending office is always at the same end, the peripheral or outer; the receiving is the central cell. The central is a cell of gray substance, either in ganglion, cord, or brain. The gray material would seem to be the seat of independent power. It sets in

motion. It develops energy. It has a will of its own. It sits as a ruler and a governor.

The whole mass of gray substance of the great cerebro-spinal ganglia is an aggregation—a myriad multiplication of the central cell.

We have seen that the sensitive cell has but one office and relation to the system, to transmit messages from periphery to center. In its simplest office, the central cell has at least a double relation. First, it receives the impulse sent by the sensitive cell. Second, an amount of energy is at once developt according to the impulse received, and manifested without hesitation in the direction indicated. A finger is prickt by a needle. The central cells are almost simultaneously informed; a sufficient energy is induced to withdraw the hand. The time taken for it all is quite infinitesimal, but there is no mistake made between hands or a hand and a foot. The nerve fibril by which the message goes to the muscle to withdraw the hand differs in no wise, so far as we can see, from the fibril which carried the message of information. They seem to be simple wires. But they do not lie in contact. A bundle of one kind is laid together inclosed by a common sheath, and when we see it we call it a sensitive nerve; a bundle of the other kind we say is a motor nerve, because we have learnt by experiments what offices are performed by each.

So far as we know, the peripheral or sensitive cells do not associate so as to pass impressions from one to another, tho a great multitude may be simultaneously affected by the cause. Thickly distributed as they are, they are distinct. They are distributed in and on other tissues.

But the central cells exist in a mass. The gray matter contains barely enuf connective-tissue to form a skeleton and supply blood. The central cells, therefore, are not only intimately connected with the sensitive cells by the sensitive nerves, and contractil tissue by the motor nerves, but also with each other.

So the cell, receiving an impulse from the periphery, may associate with itself a thousand cells of equal power, and, multiplying the force a thousand times, send it on the instant by as many motor fibrils to produce contraction.

The change in the muscle cells is a measure only of the change in the central cells.—*Illinois Transactions.*

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**We talk too much.**—Sometimes our persistency to be heard is a terrible annoyance. "Silence is golden" while speech, tho well chosen, is only silver. Sometimes we charge this looseness of tung specially to women but we men are quite as bad. We cannot throw stones because we ourselves live in glass houses.

## A STOCK OF TEETH, AND HOW TO SELECT FROM THEM.

DR. A. W. BURNHAM, LOWELL, MASS.

I have it from good authority that many dentists will buy twenty sets of teeth and use most of them before stocking up again. Pity the poor patients. Another will use noth ing but small teeth; another will buy only two varieties, and, still worse, another buys hardly more than one, and all his patients have to have that one; the delicate, refined, angelic young lady has the same mold as a stout, tobacco-chewing Hibernian. Another will only buy white teeth. These are all bona fide cases. Do you wonder at the many deformities?

Artificial dentures require greater skill, more good taste, a keener eye for beauty or adaptability than any other part of dentistry and the selection of proper teeth is of paramount importance. Remember, "The highest aim of the dental art is for the dentist to conceal his art." This demands the best work we can do.

To those who think they can fill teeth better than they can do anything else, or prefer it because it pays better, we would say, do that part, and do not pretend to do plate work and run this branch down, as you will surely do by only taking the impressions yourself, and then sending them to the basement to the office boy, or round the corner for those to do who have never seen the patients and cannot tell what they need. If you pretend to do it attend to it in person, and devote enuf time to it to do it well. See to it that each set is properly selected; to do this is more than grinding in, and there is something besides a good-fitting plate. It is easier to grind in than to select. Consult your patients, get their ideas, and if you never saw their natural teeth look at their children's, if they have any; get something as near their natural ones as possible, so as not to make great change in their appearance.

I remember a gentleman for whom I made a partial set, upper and lower, taking in three teeth, central, lateral and cuspid. It was difficult to find large and dark enuf teeth to match the natural ones, but I did. I added to the plate from time to time as he lost others, and I knew he would ultimately require a full set. I lost sight of him for several months, when, at an evening party, I met him; I came near laughing in his face at his wonderful and comical change. He had a full set of teeth, short, white, and of the smallest—what a blunder! A few months after I noticed he had corrected the blunder partially and had taken a medium shade and size, which was a great improvement, but they did not look natural. You rarely want artificial teeth as large as natural, when putting in whole sets. A short time since we took out the remaining teeth for a lady. I saved them for reference. After taking the impression she said she wisht large teeth,

for her natural were large. I showed her White's No. 100, the largest tooth made, and askt if she wanted as large as that. "No, not quite." "Your natural teeth were larger," said I. I then showed her the natural teeth and they were wider. I used teeth about two-thirds as large.

In selecting teeth properly we should have a large variety, 100 sets is small enuf. How many dentists have as many? My own stock I thot was getting low but I found I had 100 gum, two-thirds as many plain, besides 6s, 4s, etc., and since then I have added largely. In selecting teeth don't select irregular upper when the lower are regular, for that is rare in nature. The under are generally more irregular than the upper, but if the under are much so the chances are the upper were also. In the great variety which the different makers are giving us, it is rare you cannot find about what is needed, but no *one* of the leading manufacturers possesses all the advantages, and I should dislike much to be shut up to any one, for each has some peculiar merits which the others have not.

I have lately examined the teeth made by C. Ash & Sons, London, and have been agreeably surprised in the great variety of shade and shape, the blending of shades, the fineness of texture, and, above all, with their exceeding naturalness, surpassing anything I have ever seen. They do not make gum sections, only single teeth. It would be a good thing if we should use more single teeth instead of gum sections, which are apt to be a little stiff in spite of all we can do. It is more work to use the plain teeth; perhaps that is the reason they are not used more; but to reach the best results use single teeth.—*N. E. Trans.*

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**Peroxid of hydrogen** is often used with success, without any clear ideas of how it acts. Oxygen is soluble in water, and a watery solution of this gas is slightly useful as a disinfectant. This is only because a very minute portion of the oxygen is active, and the inefficiency is due to the fact that most of it is quiescent, or passive. But when the peroxid of hydrogen is applied, slight affinities are able to take a part of the oxygen from the hydrogen, and thus liberated, it attacks the combustible matter in contact, with all the fierceness of its active state, and the complete burning of carbonaceous matter is proved by the frothing caused by the escape of carbonic acid gas. The objectionable matter present, as in an abscess, is burned into carbonic acid, water, and nitrous acid, which latter is itself a disinfectant, by virtue of its affinity for alkalin substances. All the results of this oxidation are visible in water and therefore easily washt away.—*Geo. Watt.*

## THE TREATMENT AND FILLING OF ROOT CANALS AT A SINGLE SITTING.

DR C. T. STOCKWELL, SPRINGFIELD, MASS.

[Part of a paper read before the Vermont State Dental Society.]

Open well into the pulp chambers; adjust the rubber dam, or not, as circumstances may suggest; remove all debris as thoroly as may be; after doing this inject $H^2O^2$,–hydrogen peroxid; wait a few moments and note the bubbling that is pretty sure to follow; wipe the cavity with absorbent cotton and again inject $H^2O^2$; *repeat* the application of $H^2O^2$ till no bubbling follows its application. Your pulp canals—and, I believe, the dental tubules also—are now *clean*. The next step is to dry the cavity as thoroly as absorbent cotton will make it, and immediately saturate the canals with fresh bi-chlorid of mercury—$^1/_{1000}$ strength. After the bi-chlorid of mercury has remained in the cavity for a few moments I remove the *surplus* and thoroly bathe it with Sander & Sons extracts of eucalyptol, making that the vehicle for a considerable quantity of iodoform. I then warm fine, delicate points of base plate gutta percha, and dip them into a solution of iodoform and eucalyptol and carry them into the canals, filling the apex thoroly. I usually fill the canals and pulp chamber entire in this manner. In the more suspicious cases I frequently vary the treatment as follows: First, fill the root canals, or the upper portion of them, as above, with gutta-percha dipt into the solution of iodoform, add eucalyptol; then fill the remainder of the canals and the pulp chamber with cotton, moistened slightly with eucalyptol and loaded heavily with iodoform, sealing this combination in the pulp chamber with gutta-percha. The crown cavity may be filled with such material as conditions indicate for a permanent filling. This, stated as concisely as I am able to do it, is my present method of treating practically all cases of "dead" teeth. Besides the advantage of being able to treat and fill at a single sitting, the results are apparently better than by any other method I had previously adopted. I have yet to meet a single case where any trouble has followed.

Please note two things specially. *First*, the extract of eucalyptol is the manufacture of Sander & Sons, Australia. With no other preparation have I had any success.

*Second.* Note the fact, and *remember* it, that no carbolic acid is used in *any part* of the operation. I fear I cannot impress this strongly enuf on the minds of many, so strongly are they wedded to the ever present carbolic acid, and its universal and indiscriminate use.

One of my professional friends who has been experimenting with this method, gave me, a few days since, the following results. A patient had three "dead" teeth in her mouth, and all of them had fistulous openings. He treated and filled two of them, by the method

I have described, one on each of two separate days. With these two no trouble followed. The fistulous openings had commenced to heal on the day following the treatment. With the third, after using the $H^2O^2$, the idea occured to him that he would "fix that a little extra nice," and so he bathed the cavity with strong carbolic acid just before introducing the filling of gutta-percha and iodoform. The fistulous opening to that tooth is *still open*, and shows no signs of healing.

A second professional friend writes as follows: "The next day after seeing you I proved the $H^2O^2$ an *excellent* thing. I opened into the root of an incisor that had been suffering slow progressive caries for some years. The decay was nearly black, and acted as an almost effectual stop to egress of gases from a pulp, dead six months. I judge this to be so from the odor when I did get it finally open. I used some fresh $H^2O^2$, and the way it bubbled and sizzled was queer enuf. I used it till such action ceast. I then closed the apex with cotton and iodoform, filled the root with base plate gutta-percha, and the cavity proper with gold. No trouble *at all.*"—*Archives.*

**Accurate Impressions for Pivoting.**—Dr. Wm. H. Trueman says: For these operations to be successful, the root should be fully prepared, and the pivot that is to be used in the finisht piece carefully fitted to the pulp canal. This pivot should be in place when the impression is taken, and be brot away as part of it when the impression is removed from the mouth; in no other way can its position be positively assured. The impression should always be taken in plaster, so there will be no possibility of any unseen change taking place while removing from the mouth. It is best to discard all form of cups, and to build the plaster into the space over the root, and round the adjoining teeth with a spatula, working it in place where necessary to do so with a lock of cotton.

In this way, an impression and cast can be secured with ordinary care, on which a fixture can be constructed that when done will accurately fit the place it is designed for.

An ordinary dental plate fits against a soft and yielding surface; if it is important to have a correct model on which to construct this, how much more important when we desire to accurately adjust a plate to the end of a hard unyielding root. Even if it is held in place with cement, unless that cement is amalgam, the permanency of the operation, its comfort and its cleanliness, depends on its edges fitting closely at all points so as to protect the cement from wear and disintegration. The same accuracy in the model is called for in bridgework, the so-called Richmond crowns, and other methods of replacing lost teeth, or repairing the ravages of decay by other methods than by filling.—*Penn Trans.*

## PROSTHETIC DENTISTRY.

DR. A. W. BURNHAM, LOWELL, MASS.

There has been little improvement made here for the last twenty-five years. In the way of vulcanizers, I am using the same boiler I bot of Bevin before the days of the Hard Rubber Co., and with the new clock and steam gage, it is as good as any in the market that I have seen, tho Dr. Seabury has just got out a new one, which, from the description, I think must be an improvement. Ash & Sons, of London, have one which, judging from the cuts, must be better than any in America, unless it be Seabury's.

For flasks for rubber work, there is hardly a decent one to be had; they are all small and inconvenient. I had some cast a few weeks ago which are the best I have seen, but think they could be improved. The energies of the profession seem to have been spent on improving in the operative department, and running down the mechanical. In England it is not so: the mechanical department stands higher there than the operating. They do not go in so much for "copper-toed teeth" as in the United States, and their best workmen are mechanical dentists.

In large cities specialists in the medical profession are numerous, and to some extent dentistry has been divided in the same way, extracting teeth being made a specialty in several of the larger cities—also mechanical dentistry. If they could be separated to a greater extent we think it would be for the advantage of all. Then each could select that for which he was best fitted or personally preferd, refering his patients to such as he could recommend in the other branches. I think this would give us better work, and I believe patients would be willing to give a fair price for work done when they see that it is done artistically and naturally; for, quoting the words of another—

"All works of taste must bear a price in proportion to the skill, taste, time, expense, and risk attending their invention and manufacture. Those things called dear are, when justly estimated, the cheapest; they are attended with much less profit to the artist than those which everybody calls cheap. Beautiful forms and compositions are not made by chance, nor can they ever, in any material be made at small expense. A competition for cheapness, and not for excellence of workmanship, is the most frequent and certain cause of the rapid decay and entire destruction of arts and manufactures." Unless we infuse into prosthetic dentistry the true principles of art we shall fail to elevate this branch of our profession to its proper position.—*N. E. Trans.*

## ESSENTIALS OF CAVITY PREPARATION.

1. A cavity should be so prepared and its border so beveled that when filled the tooth will offer the greatest resistance to mechanical and chemical forces.

2. Complex cavities should be so simplified and their parts made so accessible that the filling material can be easily and surely adapted to their walls.

3. Approximate cavities which extend to the excising edges or occluding surfaces of the teeth, should be so prepared and filled that strength will be equally divided between tooth and filling.

4. The walls of a cavity should have no corners or acute angles, and should when possible form the segment of a circle, and the bevel of the enamel should, as far as may be, conform to the line of its cleavage.

5. Smooth, strong walls, secure anchorage and perfect adaptation of the filling material to the tooth bone are the essentials of durability.

6. As regards the enamel, it is better to remove too much than too little; as respects the dentin, better to remove too little than too much; and as to the anchorage, it had better be too deep than too shallow.

7. Anchorage should be secured by so combining pits and grooves as to do the least injury to the dentin and give the greatest strength to the filling; and the enamel should, when possible, be supported by living dentin.—Bennett, in *Dental Cosmos*.

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**Crowning Roots** —While it is the province of prosthetic dentistry to supply teeth to the mouth, it should never be allowed to contravene the preservative efforts of the operative department; consequently it becomes the imperative duty of every operator to preserve every root that can be made useful by the most efficient methods of crowning. The merits of the best methods of crowning are so universally admitted that I deem it unnecessary to enter into any argument in regard to the utility and efficiency of this method of saving very many roots. They can thus be made useful and of benefit to the personal appearance, and we can avoid the annoyance of a plate. Moreover, we are all well aware of the difficulty of some mouths retaining a plate so as to be used with any comfort. If we do not resort to crowning, our patients are ofn compelled to wear a plate all through life, merely to supply the loss of one tooth. Again, in many instances, it will be far better for both operator and patient to resort to crowning instead of many of the extensive contour fillings, which are ofn inserted into frail teeth of poor structure.—*K. B. Davis.*

## OXYPHOSPHATES AND TEMPERATURE.

A troublesome obstacle to success in the use of oxyphosphates is the temperature of the air, heat hastening the chemical changes. The difficulty is likely to occur only in the hotter seasons of the year, and can readily be overcome by placing the mixing slab, as well as the acid and oxid bottles, in cold water till their temperature has been considerably reduced.

During severe winter weather too low a temperature also gives trouble, the acid and oxid, even when the former is in some excess, forming a powdery mass utterly unworkable, but which melts down into an almost fluid condition when brot into contact with the warmth of the tooth *in situ*. A temperature between 60° and 65° F. secures the best results in mixing oxyphosphates.--Litch, in *Den. Cosmos*.

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**Mechanical Dentistry.**—In large cities what are called first-class dentists have done more to bring prosthetic dentistry into disrepute, than they would be willing to admit. I called on a dentist in New York, and it was one whose name I have seen in reports of the Odontological Society, so I suppose he stands well there. He had just taken an articulation for an upper set; he selected the teeth, placed them on the dumb waiter and sent them to the basement for the assistant to grind in. So he was to do the work and finish without ever seeing the patient or knowing anything about her face or looks. How was he to know what would become the lady? Do you think the lady would have submitted to have a dress made that way? But a set of teeth, which was of much more importance, could be put through most anyway.

A well-known dentist told me in Boston, since this was written, that the poorest plate-work in Boston came from the offices of the best operators, who either had left it all to the boys, or had carried it round the corner for a Cheap John to do.

How long will it take the patients to find out that they can do just as well, or better, of the Cheap John's at one-third the price paid the good operator?

I called, in another city, on a dentist whom I thot was a good workman and stood high in the place. He had just taken an articulation for a full set of teeth. The lady had just gone and he was looking over a few sets of teeth; finally, picking up one, he said, "Guess that will do." "Why," said I, "don't you try in your teeth to see what would look well in the mouth?" "No." "Don't you let the patient see them?" "No, what does she know about it? I can tell better myself." Perhaps he could, and that was the best way, but it wasn't the way I was brot up.—*A. W. Burnham.*

**Successful Excision of an Osseous Tumor,** by Dr. Genese, of Baltimore. A man about twenty-seven years of age entered the Baltimore Hospital with a large swelling on the right side of his face, the result of a blow from the handle of a windlass, about thirteen years previous. He was in good health, and the swelling gave no pain, but it was unsightly, and he wisht it removed. Dr. Genese was sent for by Dr. Billings, the surgeon in charge, for consultation, and the tumor was diagnosed non-malignant. It extended from the external plate of the superior maxilla, involving the malar and zygomatic portions. It was deemed unsafe to administer an anesthetic, for fear of hemorrhage and possible strangulation from flow of blood. To avoid a scar it was decided to operate wholly within the mouth. The cheek was distended, the periosteum dissected from the tumor and held away with forceps. An incision was made along the border of the tumor, and this followed with an inverted cone bur in the dental engin, to make a channel. Then with knife edge and chain-saw the entire growth was removed in three sections. The ruf edges were burred off and its surface covered with the periosteum. The roots of the teeth were left with a thin covering of bone, the mouth cleaned and the lesion drest with tannin, glycerin and iodoform. "Nervine Vito" was applied before and during the operation to prevent pain and check the hemorage, which proved successful for each purpose, tho a five per cent solution of the oleate of cocain was tried without effect. The patient made a good recovery, showing only a slight enlargement of the zygomatic aspect of the arch.—*First District Society of N. Y., in Ind. Prac.*

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**Caution Necessary.**—Dr. Guilford says: While teeth are important factors in the preservation of health, they may also become factors in disease. For this reason it is very important they be healthy and in good condition. Serious results sometimes follow both the devitalization and the capping of pulps; it is therefore important that each operation be done in the most careful and skilful manner, and under the most favorable circumstances.

The young practitioner labors under great disadvantage from his lack of experience. Each year I warn the students under my instruction against assuming undue risks. I relate to them the Gardner case, where death resulted from pyema, following alveolar abscess; and also the Southwell case, where the dentist, tho not harming the patient, seriously injured his case before the jury, by having placed arsenical paste in a tooth already devitalized.

Both physicians and dentists are constantly in danger of prosecucution for mal-practice either by the ignorant, or by those wishing to

take advantage. In view of this we should constantly be on our guard.

Physicians, as a rule, are unjust toward dentists, for they often seize on a single misfortune at our hands, and make it the occasion for a wholesale condemnation of a very correct practice. We do not have one serious misfortune to one hundred of theirs, and yet patients will generally side with them when a question rises between us.—*Office and Laboratory.*

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**Abscesses.**—Dr. Tees says: With one exception, I have never met with any very serious case of alveolar abscess. Last spring a patient called with a recently swollen face, and I found on examination the three roots of the first left upper molar, with the second molar, very loose, which I extracted. Aside from a spongy condition of the gums, I saw nothing different from an ordinary abscess, and I assured the patient that he would get relief in a short time. The swelling not subsiding, the next morning he called on his family physician, and was sent to a surgeon. He was told that an operation must be performed within twenty-four hours, which was done, an incision being made through the cheek. I learned this much from a relative. The case proved fatal, the patient gradually sinking after the operation. I regretted that he did not return to me the next day for treatment. If it had then proved a case for the oral surgeon, I would have taken him to Dr. Garrettson, and thus had a chance to learn something of the nature of the disease. Physicians and dentists should work together more than they do, and our professors can do much toward bringing about this desired end.

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**Gutta-percha Foced through the Roots.**—Dr. Maxfield, of Vermont, says: A case I had this last week will illustrate how harmless the gutta percha is when foced through the end of the root. A gentleman came to me a little over a year ago to have a crown placed on a left superior lateral. I found the root badly decayed, as he had been wearing a crown with a wooden pivot, and an abscess on that root, also one on the root of the adjoining central and no fistulous openings. After drilling through the roots I treated with iodoform till the abscesses were healed, then I filled by pumping up a solution of gutta percha containing iodoform, then dipping the gutta percha cone into the solution and forcing it up into the roots, I placed a Bonwill crown on the root of the lateral. Last week he came in again, having just broken off the crown. On examination I found the root broken off even with the alveolus and as the other front teeth had large approximal cavities which had cement fillings in them, he insisted on having the other three teeth extracted. I made a plate and then extracted

the four incisors. After extracting I found the gutta percha extending through the root of the central (which I had filled) about the sixteenth of an inch, and this root had as healthy an appearance as any of the four that I extracted.

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Steubenville, Ohio, May 14th, 1886.

Ed. ITEMS OF INTEREST.

Dear Sir:—I have been the recipient of an occasional number of the ITEMS OF INTEREST for so long, and I have found them so interesting and valuable that I want to acknowledge the debt. And since it is in bad taste to offer money in return for a gift, please accept my earnest thanks for past favors and the enclosed $2.00 for two subscriptions, as evidence of my appreciation of the excellence and value of the ITEMS OF INTEREST. Please send one copy to my address and the other to person and place indicated on blank.

I want a man to prove that he is worthy of that high trust before I grasp him cordially by the hand and take him to my heart as a friend. I want a new "venture" to prove that it has a right to live, before I contribute to its support. The ITEMS OF INTEREST proved that in a remarkably short time. I have watched each succeeding number with growing interest and believe it to be the most *practical* and hence the *best* dental journal that is publisht. Trusting you will continue in the course so wisely pursued heretofore.

I am, Very truly yours, E. C. CHANDLER.

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**The Difference Between Cohesive and Non-Cohesive Gold,** says Prof. T. W. Brophy, consists in a film of some substance which prevents the cohesion of each piece to the preceding one. When he desires to use soft gold, he places it in a drawer and subjects the pellets to the fumes rising from a few drops of ammonia. This renders it soft and velvety, and prevents its too ready cohesion. If such gold be annealed the ammonia is driven off, and it becomes again cohesive.

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**A New Porcelain-Faced Crown and Bridge Work.**—Dr. C. H. Land's, of Detroit, is made as follows: A piece of thin platina (about No. 30) is tightly fitted round the broken crown or root of a tooth, which has been previously trimmed on its labial (or buccal) and proximate surfaces sufficiently to make room for the new material to be adjusted; then an ordinary plain plate tooth, of required shape and shade, is ground out so thin that, when held in place on the platina cap, it occupies the proper position. This thin porcelain face is then baked on the platina cap with a body specially prepared for the purpose.

## SCIATICA RELIEVED BY COCAIN.

Dr. W. B. Menz, of Vidalia, La., writes to the *Medical Record* that he was called to see a lady, fifty-five years of age, who had been a sufferer from sciatica for ten years. The pain was very severe, and extended along the entire length of the nerve. She had run the whole gamut of anti-neuralgic remedies, and had never obtained more than transient relief. Having with him a vial of a four per cent solution of cocain hydrochlorate, Dr. Menz determined to try the efficacy of a subcutaneous injection. The hypodermic needle was inserted deeply over the sciatic foramen, and about twenty drops of the solution past into the tissues. The pain ceast almost immediately, and during the six weeks that have since elapst has not returned, tho there has been no further treatment, and one injection only was practict. The relief given by other remedies had never been of more than from two to four hours' duration.

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**Dangers in Regulating.**—Dentists often begin the correction of an irregularity at too early a period. Twelve years of age is early enuf and fourteen would be better. Nature will often correct an irregularity which exists in early life.

[We suppose Dr. Darby would make some cases of mal-articulation exceptions.—ED.]

There is one danger to be encountered in the use of jack screws, or powerful pressure of any kind, when seeking to expand the arch, namely the opening of the suture dividing the two maxillary bones. Such a case was under my treatment some years ago. I thot I was succeeding admirably, when to my annoyance, I found a wide space coming between the two centrals. A careful examination revealed the fact that it was the suture that was opening and not the teeth that were being moved.—*E. T. Darby.*

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**Abscesses.**—Dr. F. Y. Clark, says: The difficulty of treating abscesses with success where there is no fistulous opening is generally admitted. In treating root canals there is danger of forcing debris through the foramen. He thinks it unsafe to put nerve instruments into roots. He would syringe thoroly, inject disinfectants, alcohol or ether, and seal the cavity to remain twenty-four hours before filling. The careless use of broaches causes choking at the ends of the roots.

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Cures of sciatica are reported as having taken place in Paris after a single application of Dr. Debove's method of freezing the skin above the painful parts with a spray of chlorid of methyl. The operation is said to be applicable also to facial neuralgia.

**Cleanliness of Plates.** Dr. Edward Noyes says: We should not lose sight of the great fact that extreme cleanliness is the chief and most available means for protecting the mouth from the injurious effects of wearing artificial plates of any material. I believe most of the differences observed in the relative healthfulness of mouths under gold and rubber plates are caused by the smoother surface and more perfect cleansing of the metal. The palate side of a plate ot to be finisht smooth, so that it *can* be well cleansed, and patients should be carefully instructed as to the importance of cleaning them. Prepared chalk, soap and water, applied with a brush, and the occasional use of an antiseptic will prove very efficacious in cleansing plates.

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**Continuous Gum,** says Dr. E. D. Swain, of Chicago, is, without question, the king among dental substitutes, and requires a higher order of skill than for the working of metals alone. It has all the advantages of the plastic base; with none of its objections. But here some knowledge of the manipulation of porcelain must be acquired. It is clean, strong, natural in expression, with only one slight objection,—its weight. The improvements being made in the furnaces, materials used, methods of repair, all have their tendency to make this work more popular with the dentist, and consequently with his patrons; for does not he recommend, as a rule, that class of substitutes most satisfactory to himself, when he feels that his patrons will also be better satisfied?

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**The Combination of Pocelain with Rubber,** as given us by Dr. Land, of Detroit, is by no means a step backward, but it requires for its successful manufacture a high degree of proficiency as a metal-worker, a knowledge of porcelain work as well as of rubber.

I have in a few instances used this process with perfect satisfaction to myself and to my patient. This combination is specially adapted to those with a short upper lip and heavy projecting border of the lower edge of the jaw: or, to be plainer, where a heavy undercut exists, so that in laughing, teeth and gums are fully exposed.—*E. D. Swain.*

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**Sensitive Dentin.**—In last ITEMS is asked, "What is the best treatment for sensitive dentin at the neck of a tooth?" With a stick rub the part with tannin and glycerine for several minutes. If this does not cure it, after a day or two, apply it again. I have never known this to fail.

S. F. HAWLAND.

New York.

**Fusion of roots of the teeth** is caused by irritation, or by space occurring between them and the alveolus. If by irritation the alveolus between roots is obliterated, there will be sometimes a growth of cement on the roots sufficient to fill the space, thus fusing the roots. Where, by crowding of embrio teeth, the alveolus is obliterated between them, there may be a fusion of the teeth. This is seen where a second molar is extracted with the wisdom tooth fused by cement to its surface. or more frequently attacht to its roots. Sometimes the two teeth are so blended it is difficult to find any dividing line.

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**Bridge Work.**—I would not be understood as advocating the extensive use of bridge work. However, it is of advantage where there is the loss of a few anterior teeth, and on either side good roots that can be made healthy by proper treatment. On these roots may be accurately attacht crowns, and if the operation is conducted with care and accuracy, I do not hesitate to say it will give great satisfaction to the patient, and will be as clean as any other device could be.—*K. B. Davis.*

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**Aluminum Plates.** Dr. G. D. Sitherwood says: I would like to call attention to the fact that Dr. E. D. Swain, of Chicago, uses aluminum for a base, and with good results. It has the advantage of being easily kept clean, and I think it is the coming cheap base. The French, I notice, seem to be ahead of us in the use of this metal.

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**Crowning with Porcelain.**—Dr. C. B. Parker, of Brooklyn, had a patient about fifteen years of age who, three years since, broke the right upper central tooth across the middle in a horizontal direction, exposing the pulp, which at that time was capt, and the tooth filled with oxy-phosphate of zinc. Last fall Dr. Parker removed the cement, and restored the contour of the tooth by a piece of porcelain. The anchorage was obtained in the dentin near the boundary of the enamel, around the pulp, which was found alive. The color of the porcelain had been matcht so perfectly, and the adjustment to the tooth had been done so skilfully, that close examination was required to detect a defect.

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Dr. Oliver Wendell Holmes, says: Dentistry has establisht and prolonged the reign of beauty; it has added to the charms of social intercourse and lent perfection to the accents of eloquence; it has taken from old age its most unwelcome feature, and lengthened enjoyable human life far beyond the limit of the years when the toothless and poor blind patriarch might well exclaim, "I have no pleasure in them."

**Gold Crowns.**—Dr. J. J. R. Patrick, of Bellevue, Ill., has an ingenious and a rapid way of making these. The process is described by the *Independent Practitioner*, as follows: The metal is cut out round by cutters, which are used in a small press. Then the cutters are removed, and another appliance inserted into the press, by which the flat pieces of metal are prest into cup-shape. Then the crown dies are put under the press, wherein the metal cups, after they have been annealed, are prest into the shape of the grinding surface of a molar or bicuspid tooth. This outfit for making artificial crowns is quite perfect, saving much time.

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**Hurry and Worry.** It is not "overwork," but worry that kills. Our men of brains might do a great deal more than they do, if only they were less feverish in the haste, less harrast by worry, less wasteful of energy. We are all in too much of a hurry in what we do. We have too many irons in the fire, too much busness on hand, and are far too energetic in our endevors.

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**The absurd exactions of the Medical Profession.**—M. Pasteur has been prosecuted for practising the healing art without being "properly" qualified. And yet the regular M. D's from all over Europe are sending to him for the secret of his great success in neutralizing the poison of the bite of a mad beast.

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**Mississippi Dental Association.**—The transactions of the last session of this Society are received by the kindness of Dr. A. H. Hilzin, of Jackson. We shall be pleased to bring the useful ideas of these practitioners before our numerous readers.

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The following are the officers elected at the Illinois State Dental Society meeting, held at Rock Island, May 11th to 14th: President, Dr. W. T. Magill, Rock Island; Vice President, Dr. C. B. Rohland; Secretary, Dr. J. W. Wassall, Chicago; Assistant Secretary, Dr. Louis Ottofy, Chicago; Treasurer, Dr. T. W. Prichett, Whitehall; Librarian, Dr. W. B. Ames, Chicago. The next meeting will be held at Jacksonville, the second Tuesday in May, 1887.

J. W. WARSALL, Secretary.

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With most people, the want of a well defined system is one of the chief causes of their getting behindhand with their work. A systematic method of working, combined with industry, will complete a vast amount of work in a day and finish it with ease; but without method the most industrious worker may be in a continual rush and yet accomplish little.

## MEETINGS OF DENTAL SOCIETIES.

American Dental Association, Niagara Falls, Tuesday, Aug. 3.
California, San Francisco, Tuesday, July 20.
New Jersey, Asbury Park, Wednesday, July 21.
Pennsylvania, Cresson Springs, Tuesday, July 27.
Southern Dental Society, Nashville, Tuesday, July 27.

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FRIEND WELCH:—I have long remarkt how apt and true you were in detecting small errors in syntax, orthography, and like divisions of correct and elegant language. Judge then of my surprise when I read the title of a short description in June ITEMS of George Washington's teeth, you gave it the title, "*The Father of His Country's False Teeth.*" Do you not think if the aforesaid George were living now it would cause him sufficient chagrin to be called the "Father of His Country," without the added mortification of being the sire of the "false teeth" of the "country"? Does it not come home with redoubled force when you remember specimen of this branch of mechanical denistry, put forth by charletan dentists? Pardon this reminder. It is offered in a good cause. J. W. PECK.

Canton, Ill,

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**To Keep your Syringe in good Condition.**—That syringes, (used so much by dentists,) may be kept in perfect working order, draw half full of water when they are laid away after using. The water will not evaporate, but remain in the syringe two or three or perhaps six months, just as it is left.

This may be old, but I have never seen it in print, nor heard it spoken of by any one. It has been of great service to me, and saved much time and great annoyance. FRANK ABBOTT.

New York.

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**"We Hate the Term Pulpitis."**—So Dr. Geo. Watts says. I like the expression. What term can he suggest that is better? Pulp is a familiar and comprehensive term. It is a suffix denoting inflammation. It is just as appropriate as gastritis.

Kimball, Dak. J. MILLIRON.

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**The Souvenir** of the New York Odontological Society's annual dinner is one of the neatest documents we have ever seen. Evidently, this Society is determined to keep in the front rank of the profession in all things.

**Strange Sensation from the Extraction of a Tooth.**—A young man, twenty-four years of age, wanted the roots of the right inferior first molar extracted; the crown had been broken off in attempting to extract it about ten years previous. There was no pain, but offensive excretions. On applying the forceps they cut through the root without loosening it, after several attempts they began to ake. Applying a pellet of cotton dipt in chloroform and using the screw I bored into the posterior root. In trying to extract the tooth he commenced to breathe as if something had lodged in the trachea, but the tooth was still in the jaw, and the screw intact. His breathing was getting more difficult, tho he was conscious. He could not catch a long breath for fifteen minutes, when he commenced to breathe easier, but his extremities became very num, which was only relieved by brisk rubbing. Four hours afterward this numness returned, which was again overcome by bathing and rubbing. He never had an attach of the kind before. How shall we account for it?

Bethlehem, Pa. W. S. JONES, D. D. S.

**The American Dentists and the International Medical Congress.**—The consulting dentists in Buffalo have, says a transatlantic contemporary, decided to hold aloof from the Oral Section of the International Medical Congress. Their policy is inexplicable to us, unless they consider themselves as in some way representative of the profession. Mere personal disagreements do not certainly form a fitting excuse for even the most intelligent minority publicly withholding its support from a national undertaking. In England we are ready and willing to recognize the value of American dentistry, to hold out the hand of good fellowship to our transpontine brethren, but splits in their ranks must suggest something wrong somewhere, and we are particularly anxious to learn where.—*British Journal of Dental Science.*

**Go from Home to Hear the News.** In the *Scientific American* we read: J. S. desires some information of the new method of constructing artificial dentures that will hold firmly in the mouth without a plate at the palate. This is by a patented invention consisting of a thin metallic form, on which may be made an upper or lower denture of any kind, size or shape. The surface of the form has minute papilliform prominences, which, by displacement of mucus at the points of gum contact, effect surface cohesion as if the denture were glued to the gums, yet cause no irritation, and leave no markt indentations. By this device strong cohesion may be had with a narrow plate, and thus the sense of taste be left unimpaired. For vulcanite work proceed as usual till the flask is parted and rubber packt in the tooth part. Then cut a form to size and shape. Coat the cast with rubber cement.

# For Our Patients.

## FALSE IMPRESSIONS.

DR. W. W. ALLPORT, CHICAGO.

Some parents and others ofn enhance the suffering of children, by giving them false impressions as to the magnitude of the suffering they must experience at the hands of the dentist. This makes children, and sometimes even grown persons, so timid, they are unwilling to submit to having the most trifling dental operation performed. But few persons have the least appreciation of the amount of trouble and discomfort they cause by giving these impressions.

Every one who has paid any atttention to the action of the mind, or has observed its operations in every-day life, is well aware of the power of the imagination to produce or increase suffering.

The great influence this faculty has on the bodily functions, either in the production or relief of disease, has long been recognized by medical men. Says a writer, in speaking on this subject: "While on the one hand, the happy effects of a well-grounded confidence are daily brot under the observation of the medical practitioner in the recovery of patients under the most unfavorable circumstances; on the other, the direful consequences of this instrumentality are strongly exhibited during the prevalence of some epidemic diseases. These are known to affect individuals in proportion to the degree of apprehension that prevails; whereas medical men and others, who under these circumstances are not so liable to be influenced by the terrors of an excited imagination, are much less likely to be affected by the disease, or, if they are attacked, the termination is favorable in most cases. In many instances, again, and specially after accidents and operations, tho the circumstances appear to be most favorable for recovery, yet, if the *morale* of the patients be so influenced as to make them apprehend an unfavorable termination, how frequently does it occur that these prognostications are verified by the result! Predictions of the occurrence of disease or death at a certain period, by the hold they obtain on the patient's imagination, occasionally bring about their own fulfilment. It is said, that in the Sandwich Ilands there is a sect who assume the power of praying people to death: 'Whoever incurs their displeasure, receives notice that the homicide litany is about to commence, and such are the effects of the imagination, that the very notice is sufficient with these people to produce the effect.'"

The culprit placed in the prisoner's box for trial, buoyed with the hope that the sharp and ingenious argument of his counsel will convince the jury he is innocent, sits with composure, and frequently

with indifference; but when the verdict of guilty is rendered, when his last hope is gone, mark the effect ofn product on his physical energies. Tho a powerful man, he is at once shorn of his strength; his form trembles; and under all the dreadful ideas which an excited imagination now suggests, he is overcome, and in despair, falls prostrate at the feet of justice, as if stricken by a thunderbolt. Why this remarkable change? There is no bodily disease thus suddenly developt. The man's physical organs are as healthy as before. It is the mind—the action of the mind on the body—which thus deranges and unnerves it.

A large portion of our happiness or misery is dependent on the workings of the imagination. This faculty may be so trained as to be a source of constant pleasure, or so directed and perverted as to make us continually miserable. It has been said that some die a thousand deaths in fearing one. So also of every pain or evil. They may be indefinitely increast by fearing them—by anticipating them—by allowing the imagination to dwell on them, and to draw horrid pictures of suffering.

This is specially so of sufferings experienced in dental operations, and still more particularly when the patients are children. When a dental operation is to be performed, instead of telling the patient of the suffering that will be relieved by it, the short time it will take, and really small positive pain it will inflict, the patient listens to overwrought tales, and allows his imagination to gloat over it, compares it to a thousand horrid things, and talks to others about it, till the imagination is stimulated so that he suffers a thousand times more in the *anticipation* than is ever realized from the actual operations of the dentist.

It is a common practice with *most* persons, when speaking of their own cases, to use the most exaggerated statements—statements even bordering on absolute falsehood, as to the severity of the pain inflicted on them by dental operations. How ofn do mothers, even in the presence of their children, tell of the torture, the cruel, dreadful torture—almost as bad as death itself,—which they have had to undergo at the dentist's. Ladies will become eloquent, tragically eloquent, over their terrible descriptions. They will vie with each other in telling their experience, as if each were seeking to make out the most awful case possible. They have been filed and sawed, bored, scraped, puncht, their mouths have been stretcht and torn, their gums lacerated and cut, their teeth and nerves torn out, their jaw broken, and a thousand other things have been done—some real, but more, manufactured for the occasion. They will exhaust the dictionary in looking for

hard words to express the terrible sufferings endured at the hands of the dentist.

Reader do you say this is an overdrawn statement? I presume you may be able to recall instances where you have heard nearly the same language used; and perhaps, too, you may recollect some occasions on which your own tung was allowed full play in describing your *fancies* in the same direction, and that, too, in the presence of children.

What conclusion must a child form who hears such accounts of dental operations from time to time? What must the little patient think when the time comes for him to go to the dentist? What other result could be expected from all this false and foolish exaggeration, than that the child should be filled with terror at the mere thot of a dentist, or anything that he might do. Surely every one must see the exceeding folly and injurious effect of these exaggerated statements on the young, and yet they are made almost daily by parents and others as if unconscious of the evil they are doing, and of the unnecessary sufferings thus inflicted on children. If dentists are to be held in such horror for inflicting the little pain that is *necessary* in the discharge of their duty to their patients, how should those be regarded who cause so much *unnecessary* suffering, by indulging their dispositions in relating their over-wrought and marvelous statements?

There is pain experienct by the patient in dental operations; nor do we wish parents or dentists to *conceal* this fact from children. We do not object to their being told the truth, but to their being told *more* than the truth. There is as much injury done in such case by exaggerating, or overstating the truth, as by denying or concealing it. To tell a child that the extracting of a tooth will give pain, is one thing, and to tell it a whole chapter of horrors, and make it feel that it is next to death, is a very different thing. It is the difference between truth and falsehood. Consider what impressions the effects of such language, on the well-being of children. It is creating the morbid excitement of the imagination, and investing it with these frightful images of pain which we have been endevoring to point out. "That faculty which so frequently enhances enjoyment by anticipation,

> 'Whose might
> Can make the desert heavenly fair,
> And fill with forms divinely bright,
> The dreary vacancy of air,'

and to which, when under proper control, the civilized world owes so much happiness, is also unfortunately instrumental in the production of much of the misery that exists, by the gloomy foreboding of expected evils, or by the ideal aggravation of present misfortunes."

Again, it is not uncommon to hear persons, in the presence of children, using harsh and censorious epithets when speaking of their

dentist. This is done when no disrespect or injury is intended; but it has an injurious influence on the minds of the young. They use language of censure and condemnation, which make children think dentists must be cruel and unfeeling men, simply because, from very necessity, some of their work cannot be well performed without giving pain. Yet such language is constantly used by parents and others, who will not hesitate to speak before children of the cruel, hard-hearted and unfeeling dentist, even when they *know* he is one of their best friends.—*People's Dental Journal.*

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**Bad Teeth of Children.**—Mr. W. M. Fisher, of Dundee, has been led by certain observations, which proved the defective condition of the teeth in a majority of school children, to suggest that some regular system of supervision by a dentist be adopted as a part of school management. The expenses he thinks should be defrayed by the parents, or, should they be too poor, by the State out of the education grant. This plan has actually been adopted in the parochial school at Anerley, in Surrey. We have long been of opinion that it would be most desirable if the health of children in all schools could by some plan be periodically past under review by a medical inspector. The possible obstacle to such an arrangement would be the expense. This may not prove insuperable, and if it does not, we may hope that this method, and also some plan of dental supervision, may find their place among the recognized form of school discipline.

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No one has too much poetry, too much hope, or faith, or aspiration. Most people have far too little. What they have, however, is usually the best part of them. Their ideals are higher than their actuals. In this lies one secret of all moral progress. Men conceive of a better life than they are living; of nobler conduct; of higher thoughts; of purer feelings. These conceptions beckon them onward and upward, and lead them to tread paths of virtue that were once impossible. The tiny sapling is less real than the dream which it suggests of a large and fruitful tree, for, by and by, the sapling will disappear and be forgotten, and the tree will abide. So the noble ideal which is now cherished in one's heart and which is presently to be fulfilled in life, is more real than the actual which it will displace. It is in these practical affairs of life and character that the imagination finds its noblest work.

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*"There is a limit to the work that can be got out of a human body or a human brain, and he is a wise man who wastes no energy on pursuits for which he is not fitted; and he is, still wiser who from among the things that he can do well, chooses and resolutely follows the best."*

J. H. GLADSTONE.

## THE BEEF TEA DELUSION.

One of the popular errors of the day is the over-estimate placed on beef-tea as a food. The truth is, its food value is so small it can hardly be clast as such, and we believe hundreds are literally dying of starvation while being fed on beef-tea. So deep-seated in the minds of the masses is this idea of beef-tea for the sick, that, on the slightest indisposition, it is the first thing thot of, and should the physician fail to order it he is deemed neglectful of the patient's diet. Beef-tea is a stimulant, and as such, at times, may be used. It may be made valuable as a food by the addition of sugar or milk, but as generally taken we believe it productive of more harm than good. The excessive labor which it imposes on the heart, kidneys and liver is well known to those who have carefully observd its actions. It is believed to be no insignificant factor in the development of Bright's disease, and its tendency to aggravate all troubles of the kidney, as well as all febril diseases, is pretty generally understood.—*People's Health Journal.*

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**John B. Gough** who recently died in this city, was one of the most indefatigable workers in the temperance cause the world has seen. Emphatically, he died in the harness, for it was on the stage as he was lecturing he fell, soon to breathe his last in a neighboring house. And it was such a death he had often hoped for. "I dread the thot," he once said "of living one day after my work is done; let me die in the harness." And he was prepared for such a sudden call. How well for all of us if, instead of being anxious to know the time and manner of our death, we are specially anxious so to live as to be always ready to answer the summons.

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## THE DENTIST'S DEFENCE.

Do not think that our feelings are hardened
Because cruelty stalks in our wake;
The hard path we pursue would be pardoned,
If you felt the great pains that we take.

Our hearts weigh us down in our struggles.
Do you note how gray-haired we become?
And how ofn we have to wear goggles
To hide tears? We may sigh, but are dumb.

Greater pains than we give to our patients
We must cheerfully bear for their sake;
Oh, yes, *we* are so very complacent,
And so meek, no complaint do *we* make.

—T. B. W.

# Editorial.

## SPELLING.

"That vext question again?" Yes, it will not down. The fact is, our spelling is so outrageously bad, it isn't a wonder all are ashamed of it,—all but a few old fossils.

The position taken by those speaking in our miscellaneous department this month, under *Spelling Reform*, is certainly very modest, a step that, it seems, all should be willing to take, and it is a step many educationists have already taken. Over one thousand teachers and professors in our high schools and colleges have taken the position here markt out, and many of them go much farther. Why not? Why not, at least go as far as to do the best we can with our defective alphabet? It would be still better to add twelve or fourteen new letters and thus represent all the elementary sounds in our language, and nearly all in every language. But tho we content ourselves for a time, with our present alphabet, let us use this with intelligence, and not so bunglingly, inconsistently, and heterogeniously as we now do. We hardly represent the sounds of our language better than when we had but 16 letters.

At any rate, can we not write catalog for catalogue, program for programme, duet for duette, granit for granite, fertil for fertile, mixt for mixed, fibrin for fibrine? And these, with the several classes thus represented, will cover the ground taken by these modest reformers. They are only here giving definit classification to what is rapidly taking place among our best writers. Many, for some time, have left off the *ue* in their decalog, catalog, demagog and harang; and their superfluous *me* in their telegram, diagram, monogram and gram. And how many thotful writers now write coquette, epaulette, etiquette, facette and rosette? How much better is the modernized coquet, epaulet, etiquet, facet and roset. It may look a little awkward to leave the final *e* off such words as deposit, hypocrit and granit, but who pronounces these words with the long *i*? If we spell hypocr*ite* we pronounce hypocr*it*. So also in pronouncing we have ag*il* not ag*ile*, febr*il* not febr*ile*. Now these words are pronounct with *i* short, why not leave off the final *e*, which was put there when these words were pronounct with *i* long? It was all right to write dipped when we pronounct it dip-ped, but we now say dipt, and let us spell it so. A book used to be publish-ed but now it is publisht; our medic*ine* used to be mix-ed, now it is mixt. Why write adamant*ine* when we mean adamant*in*, and anal*ine* when we mean anal*in*? Yet in writing this long

list of words we represent the *i* long instead of short, as: calcimine for calcimin, bromine for bromin, chlorine for chlorin, dextrine for dextrin, iodine for iodin, oxide for oxid and engine for engin.

We wish some one would tell us why they are so tenacious for such spelling as rhyme, island, thought, receipt. ache and phthisic, when so many intelligent writers are now writing rime, iland, thot, receipt, ake, tisic. Tongue used to be simply tung, why should it not be so now? There used to be no *h* in aghast, no *u* in mould, no final *e* in aye, bye-the-bye, stye, woe, adze or axe; why should there be now? And there are not with some writers.

## CONCENTRATION.

It is fortunate that nearly every man and woman may succeed at some vocation, if it is pursued with concentration of purpose. There may be blunders and losses and failures, but if there is consistent, persistent and constant endevor, there will generally be success.

But the trouble with many is, they are floating about aimlessly, thotlessly, and loosly; of course, they will not succeed. Others catch on to this, that, and the other thing for a time, hoping by some miraculous chance for success without the crucial pains of disciplin, and the slow but necessary growth of experience; of course with such trifling and superficiality they bring nothing to perfection.

Not a few are all on fire while their enterprise is new but soon become indifferent, indefinit and inconstant. They have not zeal according to knowledge. They lack depth, firmness, continuity. Many fail, not because they are vacilating or superficial or lazy, but they are not adapted to their work. They are out of their sphere, and therefore cannot concentrate the energies of either mind, body, or spirits on their vocation. Uneasy, worried, and unsettled they flounder about as a fish in strange waters. Many a minister ot to be farming, many a lawyer ot to be digging, and many a dentist ot to be cobbling.

But suppose we have made no mistake in our calling, what then? Let us stick to it, concentrate all our energies on it, and never tire of it; make it our pleasure as well as our work; live in it and have it live in us; shape ourselves, our circumstances, and our lives so as to give it the greatest advantages, our best thots, and our all-absorbing energies. These men of one idea generally make life a success—or at least their busness; and, tho they may be poor in intellect and purse, and circumscribed in sphere and opportunity, they outstrip many a bright, rich competitor who leans on his laurels. No busness will keep us if we do not keep it. It must be nourisht by all possible means. Tho we may have our diversions, this must be our life work, or constant work, our only work; so completely that it shall destroy our very

desire for any thing that might interfere with its interests; it must so entirely absorb us that it shall become our very element.

Two young men equally competent by education and culture, and with equal opportunities and financial resources, commence the practice of dentistry. To all appearances, they give equal promise of success. *But* while one is persistent in his purpose, the other is vacilating; while one is unremitting in his studies, the other is spasmodic; while one concentrates his whole powers of body, mind, and spirits to gain a busness, the other is waiting for something to turn up—sits back in dignified reserve for patronage, and seeks to kill time by novel reading, smoking, and entertaining loafers. He may not only be the equal but the superior of the other in *general* training, accomplishments, abilities, and backing, but the other will become establisht while this one is idle; and the other in spite of natural awkwardness, and other disadvantages, will leave the self-confident, assuming, dreaming nice young professional far behind.

The community is not indifferent to our personal qualities, to our eagerness and to our merits for success. If we do our part by concentrating every faculty to our advancement and their welfare, the public will reciprocate our honest and faithful endevor by giving us their patronage.

If, as parents, we encourage, cultivate, and persist in this quality of concentration in our children, it will be a wonderful help in their studies, a golden feature in their character, and by and by, one of their best stocks in trade.

Ten years since we were passing a little building out in a corn field, with many queer devices round and through it,—so many strange things in every direction, we askt a fellow passenger what it ment.

"That," said he, "is the work-shop of a busy young man. He is really consuming body and mind trying to bring something out of nothing, and every once in a while he does force nature into apparently new combinations, and bring forth wonders where before there seemed to be nothing. He really *invents* things marvelous, and as useful as marvelous. Tho a young man of slender frame and of limited means, you may pass this way day or night and find him hard at it."

Recently we saw him the observed of all observers in the Franklin Institute Electric Exhibition, and his exhibits were the most numerous and wonderful and practical of all those wonderful displays.

This was Thomas A. Edison. He tells us that, when a mere boy, he suffered from the great weakness of incoherence of thot and action, wandering in his mind to no purpose; never bringing anything to pass because never pursuing anything with concentration of purpose till it was perfected. By severe disciplin he brot himself to the habit of

persistency—stick-to-it-iveness—concentration of every power and the development of every possibility,—till finally he could keep his attention, and the unbending energy of all his faculties on one thot or purpose or plan till it brot forth fruit, or proved utterly worthless. As an illustration: one day he conceived the idea that he could produce an uninterrupted light from electricity by having between the outgoing and returning wires of his battery an interrupting substance like carbon for the electricity to play on; and this play would be the light. He finally proved this on an experimental scale. Any one seeing his electric lamp posts throughout his corn field would have pronounct him a crank of the wildest sort. Weeks and weeks, and months and months past in trying to make satisfactory results. And when he had succeeded he had failed; for he could not make such a combination of carbon that could be so attacht to the wires as to produce permanency of flame. His assistants were worn out in their endevor to please him. Still he workt on. At last, he was so confident he was nearing the desired result, he would not leave the shop till it was an accomplisht fact. He workt on all that day, and all that night, and all the next day, snatching a bite to eat now and then, but allowing himself no time for sleep, till, finally, trying one of his carbon sticks, he found it perfect in its work.

Come down to "dots" with your thots and plans and labors, and not wander all over creation to find something to do. Don't try to do everything; learn to do something well, and then stick to it till it has brot forth fruit. Don't try to know everything; learn to concentrate your studies on some special line, and be a *man* in that sphere. Don't try to shine in all circles; choose some definite character, and in that determin to excel.

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## THE EPITHELIAL TISSUE.

When we consider the delicate character of protoplasms, which constitute primary organisms, it seems almost incredible that all the tissues of the body are made by placing these little globules of jelly side by side in various modified conditions and relations, to be strengthened, or stifened, or made entirely solid by earthy infiltration. The relation of the different tissues to one another, therefore, tho so distinct and dissimilar, is more intimate than at first appears.

Take, as an instance, the epithelial tissue. It not only differs much from the nervous and muscular in appearances, activities, and purposes, but widely differs in its own character in all these respects, according to the position, and use, for which each specific portion is designed.

Without making it a specific study, or being credibly informed,

who would suppose the lining membrane of the cheek and the surface of the tung is the same tissue?—that it is the same which constitutes the skin and the covering of all the internal surfaces exposed to air, such as the throat, stomach, intestines, and lungs? Had we the opportunity of looking at the soft jelly-like protoplasmic nuclei on the embrionic tissues of the jaw in utero, which afterward constitutes both the gum and the teeth, we should see no difference, without much study and the aid of a high powered lense—it is the same tissue; and if we were to examine the beautiful cells and filaments which go to make up the mucous membrane, the soft skin, the horny nails, and the ruf hair, we should see but little difference. All these substances are modifications of the epithelial tissue. Whatever its character when matured, the original structure is these innumerable and minute nuclei of protoplasmic jelly,—touching and adhering to one another in portions of their gluey cells, but apart at other portions, and thus constituting tubes and areas for various fluids and substances, for circulation and for building up.

Most of these cells do not lose their identity, forms, and functions as do those of the other two forms of tissues—the nerves and muscles. Not that all epithelial tissue continue the same through the life time of the body, for in the skin as an instance, the cells of the internal layers are crowded out to the surface by those newly forming, becoming more and more hardened in their maturity and old age, till they finally constitute scarf skin and minute scales, and as such are ultimately thrown off. Some become reservoirs of fat and oily secretions, which lubricate the surface of the skin, and others are modified into tubes known as hair, or into the horny structure of the nails. So, on the internal surfaces, the same epithelial membrane, by its cells remaining soft becomes the mucous membrane. Here instead of these cells being thrown off as scales, or converted into hard dermoid substance, as nails, they are at maturity and old age carried off in a viscid secretion called mucous.

The various glands are but clusters and multiples of these cells; and the secreting and excreting fluids of these glands are but the result of their functions.

The extremely minute cilia,—the very fine hair-like appendages of the epithelial tissues, as it lines the conduits leading from these glands, and in other places,—produce one of the most interesting features of self-protection seen in the organic system. At the roots of these cilia are the terminations of minute nerves, which serve as mediums of special sense. It is by their aid, for example, that the organ of smell is made so sensitive and accurate.

## A FEW SLIGHT ERRORS WITH POPULAR WRITERS.

Why put the letter a before rise and round, al before though, and e before special? Why say amidst for mid and amongst for among? and why add s to upward, downward, forward, and backward? Why write avocation when you mean vocation, and balance when you mean remainder? Is it not as well to say "Tho man was void of principle," as devoid of it? and why prefix dis to annul? It is on a par with "unthawing" the ice, or "unloosening" the string, or "unraveling" it. We must not ask why we have got so many gots, for we all know we have got a great many more than we have any busness with. Why say oftentimes for ofn, selfsame for same, and so ofn have to do with wherever, whenever, whatever, however, and of course? Why prefix un to till, and up to on? Finally, (tho not the finality of slight errors, but of our present reference to them), will some one tell us why popular writers say "in order" so ofn and throw so many thats in their sentences? That is a very useful word, but, my! how it is overused. It is willing to take the place of who and which to accommodate, but does it not look like "riding a free horse to death" to have it used so superfluously? We like the expression, "We speak that we know;" the which in such sentences is a redundance, but *that* that that *that* that so nicely expresses, is hardly seen in its very common use as a conjunction. Why use either of the thats in the following sentence? "Do you say that we are too technical? It is true that we like brevity; but is this a reason that we should be censured?"

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**Irregularity of the teeth** may be caused by obstructions in the way of incoming teeth. We once saw the shoot of an Apple seed come up so crooked it surprised us, for the ground all round it was nice and mellow. Examining carefully we found a small stone which had been almost raised from its bed by the effort of this delicate shoot trying to force itself in a direct line from its seed. So it is in the growth of the incoming teeth. It is not generally necessary to force them to take their proper place, they will come there voluntarily if there is no impediment. Be certain what that is, and remove it.

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**Lehman says, "That the quantity of silica** occurring in the animal organism essentially depends on the greater or less quantity of silica in the food, and consequently, that the origin of this body must be principally referred to vegetable food and *siliceous water* (and further, perhaps in the case of birds, *to the sand which they swallow*), is rendered sufficiently evident from the experiments of Gorup-Besanez, if, indeed, any demonstration of the fact is required." The italics are mine; but let it be noticed that this author recognizes the appropriation from both kingdoms, on the principle that silica is silica.

**University of Pennsylvania Dental Department.**—Of the forty-one graduates in dentistry these ten came from Pennsylvania: Charles M. Bordner, John Campbell, William M. Chambers, William S. Huber, W. Laurence Long, Louis J. Miller, U. S. Grant Moore, Alfred Nittinger, E. Payson Quick, John H. Wible. The others are: James E. Adams, William W. Daniel, Charles W. Upp and Albert T. Webb, Illinois; James S. Dennison, Charles L. Ensign, George H. Shannon and Frederick I. Sumner, New York; Bernard G. Maercklein, Reinhold E. Maercklein and Charles H. Richter, Wisconsin; Jose Paranhos, Francisco Pereira and Octavia B. Raupp, Brazil; Wilmot V. Bradley and Henry C. Seelye, Connecticut; George T. Cookingham and Frank H. Howland, Massachusetts; Walter A. Borden and William Wetherill Hawke, New Jersey; Albert F. Bennerfield, Germany; Charles H. Davis, New Hampshire; Victor Dumas, Cuba; Frank R. Griffin, Ohio; J. Bartlett Hill, District of Columbia; H. Duane, Hurlburt; Louis Alfredo Lamoutte, Porto Rico; Alexander A. McIntyre, Prince Edward's Island; Charles Hanson Rees, Kentucky; Ferdinand J. Schwarzchild, California; Leslie M. Wiggins, New Brunswick.

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**The Odotographic Society** of Philadelphia, at its twenty-third annual meeting re-elected Drs. Jos. R. Ward, Pres., C. A. Kingsbury, 1st Vice Pres., Chas. E. Pike, 2d Vice Pres., John N. Wunderlich, Treas., Chas. E. Graves, Rec. Secy., Alonzo Boice, Cor. Secy., S. J. Dickey, Curator, J. C. McCartney, Librarian.

CHAS. E. GRAVES, D. D. S., *Rec. Secy.*

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**Chemical Composition of Teeth.**—In the teeth of adults there is 25 per cent of organic matter, and 75 per cent of mineral substances. In those of very young children 30 per cent at least of organic matter, and 69 per cent only of mineral, besides carbonate of chalk and magnesia, which greatly increase the vulnerability. The more iron there is in the permanent teeth the weaker they are. The resistance of the teeth ot to be greater in proportion to the silicate in their composition when it does not exceed 50 per cent. There is very little fluorin in teeth now, though it is found in large quantities in fossil teeth.

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**Secretion.**—We have offended by substiting excrete for secrete in the following sentence publisht by us: "The secretions from the salivary ducks are alkalin." The saliva is a secretion *of* these ducts, but as the saliva passes from them is it a secretion *from* them, or an excretion?

# Miscellaneous.

## SPELLING REFORM, AND THE PROGRESSIVE SPELLING ASSOCIATION, OF PHILADELPHIA.

*President*,—H. L. Wayland, D.D.

*Vice Presidents*,—Joseph Thomas, A.M., M.D., LL.D.; Henry Phillips, Jr.; Daniel G. Brinton, M.D.; James MacAlister, LL.B.; Rev. D. P. Lindsley.

*Secretary*,—Patterson DuBois, 401 S. 40th St., West Phila.

*Treasurer*,—T. B. Welch, M.D., Vineland, N. J.

Every one who reads or writes is interested in the reform of English spelling. The Reform is not new; a gradual change has been always going on. Our modern Bibles and Shakespeares show this. The first chapter of Genesis as printed to-day, differs in 135 spellings from the same version printed in 1611. Does any one object to the loss of so many silent *e's* and useless doublets? People have an idea that man cannot change the written language. They have a vague notion that some mysterious influence called "law" must do it. But as Prof. March says, "Language is what is spoken; writing and printing are only devices for expressing it." We are all spelling reformers. Who that has dropt the final *e* from *develope* and *deposite*, would wish to restore it? Who but a pedant would choose to restore the *u* to *honor* and *color*, when once he has rid them of a useless encumbrance? Not only these, but many other words are witnesses to the *popularity* of reform; look at *traveler, jeweler, wagon, woolen, quartet, stedfast, gelatin, mold, wo, ax, ake, tho', plow, show, controller, fantom, program, catalog.* The increasing frequency of such changes in spelling proves that people prefer sense to nonsense, brevity to length, economy to waste. It indicates also that the most conservative are spelling reformers without knowing it. So, in endevoring to leave behind us some barbarisms and to make an approach toward the practical-ideal, we are only moving in the line in which our fathers moved, and in which, to some extent, we have ourselves been almost unconsciously moving. With what show of reason could we draw a line at any date and say, "Up to this line, changes and improvements are allowable and desirable; but beyond this line, nothing?" The conservative who is afraid of the name of reform, should, to be consistent, spell with Chaucer, *ronne* and *thanne* for *run* and *then*. Tyndale's Bible spells *fysshe, feawe, yff, dryncke, rightewesness*, etc., etc. Doubtless the first man who spelt *fish*, and *few*, and *if*, was set on as an idealist, a usurper, or what not. But we admire his good sense and are grateful for his mission well performed.

While the Progressive Spelling Association of Philadelphia, recognizes the ideal beauty and desirableness of a strictly phonetic scheme, it also recognizes the difficulties attending such a change. It proposes, therefore, *progressive* reform, by a system of *gradual changes* like those to which we have already grown accustomed. We must not so alter the appearance of words as to offend the eye, puzzle the sense, nor trifle with our affection for old and familiar forms; and new spellings must be backt by the highest authority.

The easiest and most natural changes, some of which are already

sanctioned by the custom of many good writers, are the omission of useless and silent letters, especially those at the ends of words. We must not falsify history, nor disguise etymologies. Many of the proposed improvements are already authorized by our great dictionaries; some are good old English forms. All are recommended by the English Philological Society and the American Philological Association and by eminent linguistic scholars in England and America, including such names as Müller, Sayce, Skeat, Murray, Morris, Sweet, Whitney, March, Child, Trumbull, Haldeman, Lounsbury; and by statesmen, scientists, poets, educators, such as Gladstone, Sumner, Mill, Lytton, Tennyson, Trevelyan, Thirlwall, Bain, Darwin, Lubbock, Harris, Barnard. Surely these and others like them, constitute "an authority" in English quite as respectable as The Academy, in French. There is no lack of learned support; all real *authority* is for the reform. The thing is right to do, but,—*the people must do it.*

There is, therefore, nothing scholarly, literary, able, profound, cultured, nor smart, in advocating an adherence to our "lying, roundabout, puzzle-headed" orthography, which has come down to us from careless and ignorant type-setters and proof-readers. Shall we longer regard it as learned and classical purposely to perpetuate old blunders? Shall we longer permit this clog to remain in the wheels of education and progress?

By removing duplicate consonants there would be a saving of 1-6 per cent; by omitting silent *e's* a saving of 4 per cent.

The most important rule adopted by the Philological and Spelling Reform Associations, is—*Drop silent e, when fonetically useless.* We cannot expect writers and proof-readers, to stop and consider just what "fonetically useless" means, and so we append a few sample rules and a list of individual words.

Let us consider this a philanthropic work, a duty incumbent on all who deplore illiteracy, and who seek the advancement of education, individual culture, and national power.

## RULE I.

Drop *ue* in final *gue* after a short vowel.

| | | | | | |
|---|---|---|---|---|---|
| analog | catalog | demagog | epilog | monolog | prolog |
| apolog | decalog | ec'og | harang | pedagog | synagog |

tung (the early English form of tongue)

## RULE II.

Drop *me* in final *mme.*

| | | | | | |
|---|---|---|---|---|---|
| gram | diagram | kilogram | oriflam | program | telegram |
| epigram | hectogram | monogram | | | |

## RULE III.

Drop *te* in final *tte.*

| | | | | | |
|---|---|---|---|---|---|
| aigret | coquet | gazet | motet | parquet | roulet |
| aniset | duet | griset | novelet | quartet | sextet |
| brunet | epaulet | lorgnet | omelet | pianet | silhouet |
| calot | etiquet | marionet | palet | quintet | vedet |
| cigaret | facet | mignonet | piquet | roset | vignet |

## RULE IV.

Drop *e* in final *ile* when *i* is short.

| | | | | | |
|---|---|---|---|---|---|
| agil | facil | hostil | prehensil | servil | tactil |
| bissextil | febril | imbecil | projectil | sessil | tractil |
| contractil | fertil | infantil | pueril | steril | versatil |
| docil | fictil | juvenil | reptil | strobil | viril |
| domicil | fragil | mercantil | senil | subtil | volatil |
| ductil | futil | missil | | | |

## RULE V.

Drop *e* final from *ine* when *i* is short.

| | | | | | |
|---|---|---|---|---|---|
| acquilin | casein | doctrin | fibrin | intestin | oleomargarin |
| adamantin | chlorin | elefantin | fluorin | jasmin | palatin |
| amethystin | clandestin | engin | gelatin | kaolin | pristin |
| anilin | coralin | iodin | genuin | libertin | rapin |
| atropin | destin | incarnadin | glycerin | medicin | sanguin |
| bromin | dextrin | examin | heroin | masculin | strycnin |
| calcimin | disciplin | famin | imagin | nectarin | vulpin |
| calcin | determin | feminin | illumin | nicotin | vulturin |

## RULE VI.

Drop *e* in final *ite* when *i* is short.

| | | | | | |
|---|---|---|---|---|---|
| apposit | deposit | granit | indefinit | perquisit | respit |
| composit | exquisit | hypocrit | opposit | prerequisit | requisit |
| definit | favorit | infinit | | | |

## RULE VII.

Change *ed* final to *t* when so pronounct, except when the *e* affects the preceding sound, or the preceding consonant would have to be changed.

| | | | | |
|---|---|---|---|---|
| lookt | publisht | wisht | mixt | etc., etc., etc. |

## SPECIFIC WORDS.

Rime, Iland, Aile, Tho, Parlament, Yoman, Receit, Ake, Insted, Stedfast, Postumus, Agast, Forclose, Forgo.

All words in which a simplified spelling is sanctioned by any of the great modern dictionaries.

Among others this would include:

| | | | |
|---|---|---|---|
| Beldam | Myth | Ax | Mustache |
| Chlorid | Bequeath | Hord | Abby |
| Deposit | Debonair | Blithsome | Cony |
| Develop | Gypsy | Chastly | Cosy |
| Domicil | Group | Chastness | Dory |
| Envelop | Sheath | Diversly | Filly |
| Gelatin | Smooth | Houshold | Fogy |
| Granit | Wreath | Archeology | Pony |
| Invalid | Ay | Cyclopedia | Story |
| Steril | By | Eon | Sulky |
| Synonym | Good-by | Esthetic | Tawny |
| Vermin | Sty | Phenix | Turky |
| Respit | Wo | Curtesy | Whisky |
| Bad | Mold | Arbor } et al. | Tisic |
| Forbad | Adz | Honor } | Anesthetic |

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It is computed that a twelve-inch wall of hard-burned bricks and good lime and sand mortar could be built 1,600 feet high before the bottom layers would be crushed. If Portland cement were added to the mortar, the height might reach 5,700 feet.

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Lime cartridges are coming into use for blasting purposes. A hole is bored, the lime cartridge inserted, and water is poured over it. The increase in volume of the slacked lime splits and cracks the substance which it is desired to blast.

## THE BEEHIVE.

Observe these busy little bees a laying up their honey, and try to be as wise as these by saving all your money. You smoke, say five cigars away, and drink, say six times daily; cards, pool and billiards, too, you play and treat the fellows gayly. In twenty years this fun will cost, according to good scholars, with interest and time that's lost, just $20,000. But if you count your loss of health and self-inflicted trouble, you'll find this foolish waste of wealth will figure more than double. Then when its time no more to slave but pleasure take, so sick you will feel because you didn't save, you'll want some one to kick you. So imitate these busy bees and all your pennies treasure, and then when older take your ease with forty years' of pleasure.—*Dodge.*

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The last statistical returns for Great Britain and Ireland show the money spent yearly on the items mentioned:

Bread, £70,000,000; butter and cheese, £35,000,000; milk, £30,000,000; sugar, £25,000,000; tea, coffee, and cocoa, £20,000,000; rent paid for farms, £60,000,000; rent paid for houses, £70,000,000; woolen goods, £46,000,000: cotton goods, £14,000,000; linen goods, £6,000,009. Average yearly expenditures on intoxicating liquors, £136,000,000.

This shows that *twice* as much money is spent for intoxicating liquors as for woolen, cotton, and linen goods put together; considerably more than the whole amount spent for the added rents of farms and houses, and more than all that is spent for bread, butter, cheese, and milk. Of course, to this must be added the outlay for all that rum costs in increase of paupers, police, insanity, vagrancy, etc.

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EVERY ONE has a cure for sore throat, but simple remedies appear to be most effectual. Salt and water is used by many as a gargle, but a little alum and honey dissolved in sage tea is better. An application of cloths wrung out of hot water and applied to the neck, changing as often as they begin to cool, has the most potency for removing inflammation of anything we ever tried. It should be kept up for a number of hours; during the evening is the usually most convenient time for applying this remedy.

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In case of a bite from a rabid dog, Dr. Billings recommends that the wounds be cauterized with strong carbolic acid. It is much less painful and more effective than burning with a hot iron. The wounds will also heal in less time.